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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/709,203	11/09/2000	Fumio Nakano	NEKO 17.961	3265

7590 05/14/2004

Katten, Muchin, Zavis & Rosenman
575 Madison ave.
New York, NY 10022-2585

EXAMINER

NGUYEN, DUNG X

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 05/14/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/709,203

Applicant(s)

NAKANO ET AL.

Examiner

Dung X Nguyen

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 6 and 8 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 5, 7, 9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 5, 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 4, 6, and 8 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Nakamura. (US patent # 6,422,703 B1), Yamawaki et al. (US patent # 6,163,585), and further in view of Sumio Ozeki (hereinafter Sumio, JP patent # H04-96535) submitted by applicant.

Regarding claim 1, Nakamura discloses (figure 1 and abstract):

- First synchronization circuit to match a phase of input data (column 3, lines 44 – 48) to a phase of first clock (VCO5) to output the signal phase-matched to first clock signal (column 14, lines 45 – 52);
- Selector (3) for selecting the input digital signal phase-matched to the first clock signal or an output digital signal *c* (column 7, lines 49 – 60), depending on a value of a selection signal (7) via blocks 4,5, 1 (column 7, lines 49 – 54 and column 13, lines 50 – 60);
- Phase/frequency comparator corresponding to a second synchronization circuit inherent having a second clock circuit (column 6, lines 10 – 64) synchronizing the synchronization detection section (7), output signal (9a), frequency divider (6).

While Yamawaki et al. discloses that figure 14 corresponding to a second synchronization circuit synchronizing f_{IF} signal to output f_{RF} (column 8, lines 42 – 49) with the corresponding clock 2 (VCO5) as the output digital signal (column 8, lines 23 – 49):

And, Sumio discloses (page 26 of the translation paper):

- Block 10 corresponding to a timing control circuit to generate the selection signals based on the encoding timing signal WT inherently must have a first clock and the second clock signal $\langle r \rangle$ to output the decoding register selection signal RRS.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Nakamura, Yamawaki et al., and Sumio to fulfill the limitations of the claimed invention for improving the receiver of the communication system.

Regarding claim 4, Nakamura, Yamawaki et al., and Sumio differ from the instant claimed invention that they do not state that the second clock signal having a higher speed than the first clock. However, setting the second clock signal having a higher speed than the first clock is on hand of one of ordinary skill in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement Nakamura, Yamawaki et al., and Sumio to fulfill the limitations of the claimed invention for a designed choice.

Regarding claim 6, from the limitations analyzed as claim 1, Nakamura. further discloses in figure 2 that the output signal c is fed back to one input of the selector (3) via block 1.

Regarding claim 8, the limitations are analyzed in the same manner set forth as claim 1.

Allowable Subject Matter

3. **Claims 2, 3, 5, 7, 9, and 10 are objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tomita (U.S. Patent No. 6,643,820 B1) discloses a signal processing circuit with timing recovery PLL.

Gläser et al. (U.S. Patent No. 6,603,829 B1) discloses a programmable phase matching.

Migita (U.S. Patent No. 6,526,106 B1) discloses a synchronous circuit controller for controlling data transmission between asynchronous circuit.

Kiyanagi et al. (U.S. Patent No. 5,987,078) discloses a carrier regenerating circuit.

Böhme et al. (U.S. Patent No. 5,930,697) discloses a heterodyne receiver with synchronous demodulation for receiving time signals.

Ooshi (U.S. Patent No. 5,886,946) discloses a semiconductor memory device allowing reduction in power consumption during standby.

Matinez et al. (U.S. Patent No. 5,644,606) discloses a receiver with two synchronization loops.

Nakauchi et al. (U.S. Patent No. 5,455,840) discloses a method of compensating a phase of a system clock in an information processing system, apparatus employing the same and system clock generator.

Kokubo (U.S. Patent No. 5,018,134) discloses a method and its corresponding apparatus for canceling echo in a transmitter.

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Kobo et al. (U.S. Patent No. 5,353,069) discloses a transmitted television signal waveform equalizing system.

Fukushima (U.S. Patent No. 5,682,112) discloses a phase locked loop (PLL) control apparatus.

Ohta et al. (U.S. Patent No. 5,056,121) discloses a circuit for obtaining accurate timing information from received signal

Lee (U.S. Patent No. 4,365,211) discloses a phase locked loop (PLL) with initialization loop.

Contact Information


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung X. Nguyen whose telephone number is (703) 305-4892. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Ghayour Mohammad H can be reached on (703) 306.3034. The fax number for this group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

DXN

May 07, 2004


JEAN B. CORRIELUS
PRIMARY EXAMINER
5/13/04